

VI.—GENUS APRION, Cuv. & Val.

(Our species possibly a distinct generic group, *Platyminius* Gill.)

25. *Aprion macrophthalmus*, (Müller & Troschel). (W.) (Possibly identical with *Aprion filamentosus* from the Isle de France.)

VII.—GENUS ETELIS, Cuv. & Val.

26. *Etelis oculatus*, Cuv. & Val. (W.)

VIII.—GENUS VERILUS, Poey.

27. *Verilus sordidus*, Poey. (W.)

INDIANA UNIVERSITY,
August 12, 1884.

DESCRIPTION OF FOUR NEW SPECIES OF CYPRINIDÆ IN THE
UNITED STATES NATIONAL MUSEUM.

By DAVID S. JORDAN and SETH E. MEEK.

1. *Chiola camura*, sp. nov.

Head, $4\frac{1}{5}$ in length to base of caudal; depth, $3\frac{1}{2}$. D. 8; A. 9. Scales, 6-38-4. Teeth, 1, 4-4, 1. Length (12256, Arkansas River at Fort Lyon, Colorado), 4 inches.

Subgenus *Cyprinella*, Girard.

Body oblong, compressed, rather robust; the back considerably elevated, especially anteriorly. The anterior profile rather steep and slightly concave, there being a slight depression over anterior part of eye. Snout bluntly decurved at tip; its length $3\frac{1}{2}$ in head; the height of its vertical tip nearly equal to diameter of eye. Eye small, about $4\frac{1}{3}$ in head; mouth small, somewhat oblique, the lower jaw included, the maxillary reaching vertical from front of orbit; its length $3\frac{1}{2}$ in head. Premaxillary in front on a line with lower margin of eye.

Scales large, not very closely imbricated along sides of body. Breast scaly; 16 scales in front of dorsal. Lateral line strongly decurved.

Teeth, 1, 4-4, 1, hooked, with narrow grinding surface; the edges slightly crenate.

Insertion of dorsal slightly behind that of ventrals, a little nearer tip of snout than base of caudal. Dorsal fin higher than long; its base $1\frac{4}{5}$ in head; its longest rays $1\frac{1}{5}$ in head. Anal rather low and short; tips of ventrals reaching vent; length of the fin $1\frac{2}{3}$ in head. Tips of pectorals not reaching more than $\frac{2}{3}$ distance to origin of ventrals; the length of the fin $1\frac{1}{2}$ in head.

Color, in alcohol, brownish above; sides and below silvery; tips of anterior rays of caudal dusky. A large black blotch on posterior rays of dorsal; other fins plain.

The two specimens (one 3, the other 4, inches in length) upon which

the above description is based were collected by Dr. E. Palmer, at Fort Lyon, Colorado.

This species seems to be well distinguished from all the *Cyprinella* described by Girard.

2. *Cliola urostigma*, sp. nov.

Head, 4 in length; depth, $3\frac{2}{5}$. D. 8; A. S. Scales, 7-38-3. Teeth, 1, 4-4, 0. Length (20446, Rio San Saba), 4 inches.

Subgenus *Cyprinella*, Girard.

Body rather elongate, compressed; the back considerably elevated. Caudal peduncle rather deep; anterior profile rather steep, gently convex. Snout rather blunt, about as long as eye, which is narrower than the interorbital space, and about 4 in head. Mouth not very small, oblique, the lower jaw included. Maxillary reaching vertical from front of eye; its length $3\frac{1}{3}$ in head.

Scales rather large, closely imbricated; those on the sides of body deeper than long; about 17 scales on median line of back before dorsal. Lateral line strongly deurved.

Insertion of dorsal a little behind that of ventrals, midway between tip of snout and base of caudal. Dorsal fin higher than long, its longest rays $1\frac{2}{5}$ in head. Pectorals $1\frac{1}{3}$ in head, not nearly reaching ventrals; ventrals nearly reaching front of anal, $1\frac{1}{2}$ in head. Anal short and rather low, its free margin somewhat concave.

Color, in alcohol, silvery; darker above, with a large, distinct oblong jet-black spot at base of caudal fin; this about as large as eye. Caudal fin mesially dusky; an obsolete dusky shade on last rays of dorsal.

The above description is based upon about 20 specimens (20446) collected in part by Mr. W. W. Anderson, in San Saba River, a tributary of the (Texas) Colorado River, at Fort McKavit, Texas; and about 10 others (17812) taken in Clear Creek, Texas, by Ludwig Kumlein and R. E. Earll. These vary in length from two to four inches. Most of them are in fine condition.

This species resembles *C. calliura* and *C. stigmatura*, but it has larger scales than either of these.

3. *Notropis metallicus*, sp. nov.

Head, 4; depth, 5. D. S. A 11. Scales, 5-35-3. Teeth, 2, 4-4, 2. Length (28511, Nashville, Ga.), $1\frac{3}{4}$ inches.

Subgenus *Notropis* (*Minnilus*).

Body rather elongate, somewhat compressed, formed much as in *N. chrosomus*, the back a little elevated, highest at the insertion of the dorsal. Head small, the snout not very acute, its length less than diameter of eye. Mouth rather large, oblique, the maxillary reaching to vertical from front of eye, its length $3\frac{1}{3}$ in head. Lower jaw projecting. Eye rather large, 3 in head. Interorbital region about as broad as eye.

Scales large, about 16 in front of dorsal; lateral line considerably deurved; teeth 2, 4-4, 2, the grinding surface not evident.

Insertion of dorsal fin well behind that of ventrals midway between front of orbit and base of caudal. Tip of ventrals reaching vent. Pectorals a little shorter than ventrals, their tips not reaching base of the latter. Dorsal fin about half higher than long; anal fin long and high, its free margin somewhat concave, its base $1\frac{1}{2}$ in head.

Color, in alcohol, dark brown above, a pale (rosy in life?) band about as wide as pupil running from upper part of eye straight back to middle of upper lobe of caudal fin; below this is a broader burnished dusky band, broader than eye, which extends from tip of snout along sides of body and terminates in a distinct black spot at base of caudal. Belly paler. A broad black band extending obliquely across dorsal fin; tips of anterior rays of anal fin dusky; ventrals, pectorals, and caudal pale, nearly plain.

The above description is based upon seven adult specimens collected by Mr. W. J. Taylor, in a tributary of the Altamaha (Suwannee) River, at Nashville, Ga.

All are in good condition. They vary in length from $1\frac{1}{4}$ to $1\frac{3}{4}$ inches.

This species, in its technical characters, resembles *N. rubrifrons* and other typical species of *Notropis*. It has, however, the deep coloration of the subgenus *Alburnops*, resembling in this respect, *N. chrosomus*, *N. lutipinnis* and other species with the anal fin short.

4. *Notropis alabamæ*, sp. nov.

Head $4\frac{1}{2}$; depth 5. D. 8; A. 10. Scales 8-53-4. Teeth 2, 4-4, 2. Length (35,297, Montgomery, Alabama), $2\frac{3}{4}$ inches.

Subgenus *Lithrurus*, Jordan.

Body more elongated than in *N. ardens* and *N. lithrurus**; the back little elevated; the anterior profile regularly and very gently curved from tip of snout to front of dorsal. Caudal peduncle long, rather slender. Head small. Mouth rather large, terminal, oblique, the lower jaw projecting. Maxillary reaching vertical from front of eye, its length 3 in head. Eye large, $2\frac{3}{4}$ in head. Interorbital space flattish, its width about equal to diameter of eye. Teeth 2, 4-4, 2 (probably with a narrow grinding surface).

Scales small, smaller and much crowded anteriorly; the exposed surfaces on the sides deeper than long; 24 scales on median line of back before dorsal. Lateral line considerably decurved.

Insertion of dorsal slightly behind that of ventrals and midway between anterior part of orbit and base of caudal. Tips of ventrals reaching vent, their length $1\frac{1}{2}$ in head. Dorsal fin higher than long, its anterior rays extending beyond tips of posterior ones when the fin is deflexed. Outer rays of caudal twice as long as inner. Anal fin long, its height moderate. Length of pectorals $1\frac{1}{3}$ in head, their tips not reaching ventrals.

**Notropis lithrurus*, Jordan, nom. sp. nov. = *Miunilus diplamius*, Jordan & Gilbert, Synopsis Fish. N. Am., p. 197 = *Hypsilepis diplamius*, Cope, not *Semotilus diplamius*, Rafinesque.

Color, in alcohol, dark brown above; sides with a silvery luster; belly
 e; body everywhere finely punctulate with dark dots; these extend
 the vertical fins, which otherwise are entirely plain. No black spot
 base of dorsal nor elsewhere on the fin.

This description is drawn from six specimens, varying in length from
 to $2\frac{3}{4}$ inches. They were collected in a tributary of the Alabama
 er, at Montgomery, Alabama, by Col. M. McDonald, of the U. S. Fish
 mission.

This species is closely related to *Notropis ardens*, *punctulatus*, and
 ers constituting the subgenus *Lythrurus*. The absence of black
 eakings on the dorsal well distinguishes it from most of these.

U. S. NATIONAL MUSEUM, August 13, 1884.

DESCRIPTIONS OF FOUR NEW SPECIES OF PŒCILICHTHYS IN THE UNITED STATES NATIONAL MUSEUM.

By DAVID S. JORDAN.

Pœcilichthys borealis, sp. nov.

Head, $3\frac{2}{5}$ ($4\frac{2}{5}$); depth, $5\frac{2}{5}$ ($6\frac{2}{5}$). D. VIII, 9; A. II, 7. Scales, 4-53-10;
 eral line with pores on 15 scales. Length (35747, Montreal, Canada),
 nches.

Body moderately elongate, somewhat compressed, the caudal pedun-
 rather long and stout, the general form resembling that of *P. artesiæ*
P. punctulatus. Head rather heavy, the snout bluntish, rather
 ngly decurved. Anterior profile gently and somewhat evenly
 ned. Snout short, about half as long as eye, which is 4 in head.
 uth nearly horizontal, the lower jaw included, the maxillary ex-
 nding about to opposite front of pupil, its length $3\frac{2}{3}$ in head. Teeth
 ll. Preopercle entire. Opercular spine strong. Premaxillary not
 tractile. Gill membranes very slightly connected. A small black
 eral scale. Cheeks, opereles, and nuchal region scaly; breast naked.
 les of moderate size. Lateral line very short, not reaching last spine
 dorsal, running rather high and slightly arched. Scales of belly
 e those of the sides.

Dorsal fins well separated, unusually short and small; the longest
 ne in the largest example (♀ ?) $3\frac{1}{2}$ in head, in another one (♂ ?) $2\frac{2}{3}$
 head. Soft dorsal a little higher than spinous dorsal, also unusually
 ll for this genus. Caudal long, truncate or slightly lunate, $1\frac{1}{2}$ in
 d. Anal low and short, its spines high, the first highest. Pectorals
 rly as long as head, reaching past tips of ventrals.

Color in spirits: (male) dark gray (perhaps red in life) somewhat
 ttled with darker; sides with 11 or 12 very distinct vertical dark
 ss-bands (probably blue in life), each alternate one usually extend-
 across the back, meeting its fellow of the opposite side; a dark